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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/639,078	08/11/2003	Albert S. Weiner	2829P	6945

7590 10/08/2004

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EXAMINER	
NGUYEN, MINH T	

ART UNIT	PAPER NUMBER
2816	

DATE MAILED: 10/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/639,078	WEINER, ALBERT S.	
	Examiner	Art Unit	
	Minh Nguyen	2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 August 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) *25-36* is/are withdrawn from consideration.

5)☒ Claim(s) *23 and 24* is/are allowed.

6)☒ Claim(s) *1-9,12-16 and 19-22* is/are rejected.

7)☒ Claim(s) *10,11,17 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8/11/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's response to the restriction/election requirement without traverse filed on 8/16/04 has been received and entered. The following is a detailed Office action of the elected group I, i.e., claims 1-24.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-9, 12-16 and 19-22 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 6,320,437, issued to Ma.

As per claim 1, Ma discloses a pulse width modulation regulator (Fig. 2 and Fig. 3 is the details of the delay unit 20 shown in Fig. 2), comprising:

a charge pump (Fig. 3, the circuit 40, column 6, lines 39-41);

a comparator circuit (Fig. 3, the circuit 50, it is seen as a comparator because the buffer B3 in the circuit 50 compares the DELAY signal to the threshold of the buffer B3, column 7, lines 20-25) coupled to the charge pump, the comparator circuit for providing an output voltage (Fig. 3, the output voltage at node 23); and

a latch circuit (Fig. 2, latch 10) coupled to the charge pump for ensuring that the charge pump is adjusted such that an undershoot condition and an overshoot condition of the output voltage is minimized (see the cited reference, US Patent No. 5,566,129, Figs. 4-5, i.e., the arrangement minimizes the undershoot/overshoot condition).

As per claim 2, Fig. 3 shows the input 52 of the comparator circuit 50 comprises the output VCONT of the charge pump 40.

As per claim 3, Fig. 2 shows the input 12 of the latch circuit 10 comprises the output voltage at node 23 of the comparator.

As per claim 4, the recited first signal is seen as signal CLK_OUT- which is from the output of the latch circuit 10 (Fig. 2) to the charge pump 40 (Fig. 3) to reduce the VCONT voltage to prevent overshoot condition.

As per claim 5, the output voltage VCONT of the charge pump 40 is reduced because switch S2 is closed in the first state.

As per claim 6, because S2 is implemented using NMOS (Fig. 7), the CLK_OUT- signal goes high.

As per claim 7, the recited second signal is seen as signal CLK_OUT which is from the output of the latch circuit 10 (Fig. 2) to the charge pump 40 (Fig. 3) to increase the VCONT voltage to prevent undershoot condition.

As per claim 8, the output voltage VCONT of the charge pump 40 is increased because switch S1 is closed in the second state.

As per claim 9, because S1 is implemented using PMOS (Fig. 7), the CLK_OUT signal goes low.

As per claim 12, the recited clock circuit reads on transistor N2 (same as the clock circuit of the present invention shown in Fig. 4, the clock circuit reads on transistor M9), the recited inverter reads on inverter 53.

As per claim 13, the recited clock circuit reads on transistor N2 (same as the clock circuit of the present invention shown in Fig. 4, the clock circuit reads on transistor M9), the recited pulse generator reads on inverter 53 which generates pulses at the output DELAY (inverter 53 is seen as a pulse generator because it generates pulses at the output).

As per claim 14, this claim includes the limitations recited in claims 1-9, therefore, it is rejected for the same reasons discussed in claims 1-9.

As per claims 15-16, these claims are rejected for the same reasons noted in claims 5 and 8, respectively.

As per claims 19-20, these claims are rejected for the same reasons noted in claims 6 and 9, respectively.

As per claims 21-22, these claims are rejected for the same reasons noted in claims 12-13, respectively.

Allowable Subject Matter

3. Claims 23-24 are allowed.

Claims 23-24 are allowed because the prior art of record fails to disclose or suggest the inclusion of a first SR latch, a second SR latch, first and second gates configured as recited in the latch circuit as recited in claim 23.

4. Claims 10-11 and 17-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 10-11 and 17-18 are allowable for the reasons noted in claim 23.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Nguyen whose telephone number is **571-272-1748**. The examiner can normally be reached on Monday, Tuesday, Thursday, Friday 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

9/23/04

Minh Nguyen
Primary Examiner
Art Unit 2816